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CONTENTS

4 LETTER FROM THE EDITOR

6 NEWS **Nobel Prizes**

6 NEWS **Labour vs. Tory**

7 NEWS **America out of Recession?**

8 NEWS **Dire Times for Toyota**

9 NEWS **Bretton Woods Reloaded?**

10 COMMENT **Lisbon Treaty**

11 COMMENT **Copenhagen Conference**

12 COMMENT **UK National Debt**

14 FEATURE **Flying Passports of Convenience**

16 FEATURE **Redecorating in Red**

20 FEATURE **Financial Guernica**

22 FEATURE **The Economics of Slacking**

24 FEATURE **The Traveller's Dilemma**

26 ECONOMICS OF LIFE **The Economics of Studying**

29 ECONOMICS OF LIFE **The Donations Dilemma**

32 BOOK REVIEWS **Freakonomics**

33 BOOK REVIEWS **How Markets Fail**

34 BOOK REVIEWS **Fool's Gold**

LETTER FROM THE EDITOR

Dear Reader,

Welcome to your new issue of Rationale. This final issue of 2009 continues Rationale's growing reputation for insightful economic analysis and comment. However, whereas the last issue focussed on debates in economics inspired by the financial crisis, this issue has a distinctly more academic flavour.

A number of features focus on theoretical problems and modelling. For example, Aneil Baron presents his model of slacking, which attempts to explain why the effort exerted by students has been declining with increasing graduate salaries. The Economics of Life section also contains part two of Rifdi Rafiuddin's Economics of Studying series. The issue also covers some of the more philosophical issues associated with economics such as the moral implications of the financial crisis. Ceren Baseren's feature expands on the theme of philosophy of economics by looking at the game-theoretical paradox of the traveller's dilemma and discussing its implications on our conception of rationality.

Despite the presence of several academic pieces, the magazine still retains a focus on economic interpretation and commentary on current events. Our cover feature, 'Redecorating in Red' by Daniel Jensen is an incisive critique of the 2010 US budget – reflecting the change in the public mood since Obama's election. This theme is echoed by several pieces in our news and newly expanded comment sections, which are designed to provide brief summaries and analyses of current events in economics. This issue's news includes items on the Nobel Prizes and the upcoming UK election.

This issue's book reviews include the highly anticipated *Superfreakonomics* by Levitt and Dubner, John Cassidy's *How Markets Fail*, and *Fool's Gold* by Gillian Tett. We hope these reviews give our readers a flavour of these recent publications in popular economics, as well as serving as a consumer guide.

As always, I would like to encourage you, as a Rationale reader, to get involved with the publication. Rationale is LSE's foremost student run magazine, and the only economics magazine of its type in the UK (as far as we know!). However, we rely entirely on submissions from readers. So if you have a theory to expound or an economic axe to grind, please get in touch!

I hope you enjoy your read,

Sincerely.

Charles Hodgson

LETTERS TO THE EDITOR

Opinionated?

Rationale aims to encourage insightful economic analysis and discussion. As such we encourage criticisms and responses to anything that appears in the magazine.

We have no particular political or ideological stance - so whatever your view, you can be sure it will be heard.

Send your letters to: c.b.hodgson@lse.ac.uk

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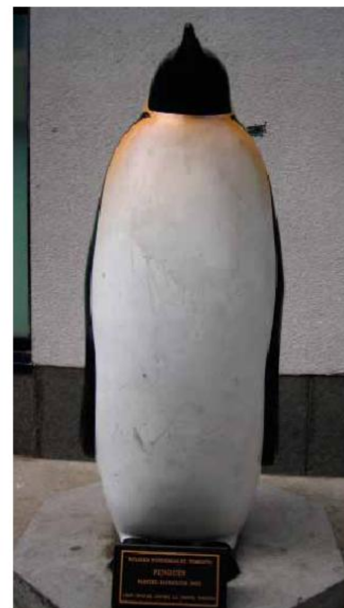

Unexpected Winners of the 2009 Nobel Prize in Economics

By Andre Wirjo

If you had looked at Ladbrokes's odds for the 2009 Nobel Prize in Economics prior to October 12, you definitely could not be blamed for thinking that Oliver Williamson of the University of California at Berkeley and Elinor Ostrom of Indiana University at Bloomington would have their names struck off by the Prize Committee members in the first few rounds of their secretive selection process. Yet, these were the 2 names announced as the official winners of the 10 million Kronor Prize for their independent contribution to the analysis of economic governance. Particularly for Elinor Ostrom, the Prize is significant in 2 additional ways: 1) She is the first woman to ever win the prize in its 40-year history and 2) She is the first non-economist winner since Daniel Kahneman in 2002.

Economic transactions occur daily in markets, firms and even households but for reasons that are currently still debatable, studies on them have rarely ventured into other institutional arrangements beyond markets. Opening your fundamental economics text, you will find that transactions at individual level are explained by no more than a simple cost-benefit analysis. Consequently, finding the institutional arrangement best suited to carry out a particular economic transaction has always been an issue. The research done by Oliver Williamson and Elinor Ostrom contributed to economists' better understanding of the long-sidelined institutional arrangements and helped shed light on this issue.

Oliver Williamson's work built on Ronald Coase's Theorem on why firms exist. He argued that markets and other institutional arrangements such as firms have their respective benefits and limitations. While competitive markets function generally well, there are times when market competition is constrained. Under these situations, it can be more efficient to carry out transactions within a single institution rather than in the market. He theorized and showed that certain complex transactions are indeed better done within a firm than a market. His later work also tried to address the main drawback of these alternative arrangements: their vulnerability to abuse. Through his research, Oliver Williamson helped to open the floodgate that led to more studies on these alternative institutional arrangements.

Elinor Ostrom, a political scientist by training, is notable for challenging the Tragedy of the Commons, a well-received neoclassical idea that common property tends to be poorly managed and should be regulated by either government or private ownership. Using the results of her studies of user-managed fish stocks, woods and other various systems, she asserted that there exist informal institutional structures and arrangements that are capable of developing successful mechanisms and hence, produce better results than either of the above-mentioned extremes. In light of the current crisis, she postulated that market failure does not always necessitate more government regulation. Her research has generated more interest in the relatively new branch of behavioral economics.

Reactions to the announcement have been mixed. Regardless, it is widely believed that the intent is to send a message to the discipline that it needs to evolve with time.

Tackling the UK Deficit: Labour vs. Tory

By Andre Wirjo

With election around the corner, major political parties are beginning to flex their muscles and mobilize their well-oiled machines. Political conferences, which traditionally have never been used as a platform for unveiling new policies, have become the ideal place to do just that. This is not surprising as people are increasingly concerned about the myriad of problems that the country is facing and expect conferences to go beyond formalizing the often-vague party manifesto.

Chief among these problems is how the next Government is going to tackle the country's burgeoning deficit, billed by the IMF as the worst in the Western world. In the financial year 2008/09 the UK recorded a general government deficit of £101.3 billion, equivalent to 7.1 per cent GDP. (UK Statistics) If left unchecked, it is expected to further increase the general government debt, which had hit a record £796.9 billion at the end of March 2009. According to a report by Ernst & Young Item Club, the deficit will leave the pound weak until at least 2014. And should confidence in the ability of politicians and policymakers to rein in deficit fail, full-scale crisis is no longer an outcome that can be ruled out.

At the Labour Party Conference in Brighton, Chancellor of the Exchequer Alistair Darling started off by justifying the deficit increase under Gordon Brown's government. He argued that it is a necessary byproduct of actions taken by any responsible government to reduce the impact of the global recession. However, he assured the audience that in line with the government's commitment to keep public finances on sustainable path, firm plans would be put in place to halve the deficit over four years.

The Government is actively pursuing the possibility of raising the top rate of income tax and ensuring the return of unpaid tax from offshore tax havens. He added that although the Government will also be looking at cutting its own spending, cuts will not affect front-line public services. To ensure that these are not just electoral promises, he shared that the Government will introduce a new Fiscal Responsibility Act that requires it to reduce the budget deficit year on year.

Not in the governing position since 1997 means that there are few existing policies the Tories had a role in formulating and hence need to protect. As a result, the party has the flexibility of proposing bolder measures than Labour. At the Conservative Party Conference in Manchester, Shadow Chancellor George Osborne unveiled measures to freeze the pay of more than 80% public workers, raise the state pension age early and cut in Whitehall costs. Together with the abolishment of child trust funds born to richest two-thirds of families and tax credits for families with incomes over £50,000, they are expected to save the country £7 billion a year. Responding to comments that these measures are "difficult", Opposition Leader David Cameron said that the country had "run out of money" and tough action was required.

Now that all plans have been revealed, it is up to the electorate to decide which they like better.

America Finally out of Recession?

By Hussain Abdullah

America has suffered its longest recessions since 1993, and not just any recession at that. This was one met with almost global reciprocity. However, it seems that the worst is past for the land of the free and that a strong economic recovery lay ahead. Or does it?

The US government is eager to promote that it is no longer in recession with its GDP report for the third quarter of 2009 clocking in at 3.5% and giving the US three quarters of continuous growth; the indicator of whether a country has pulled out of a recession. However, there are mixed reports coming in from all angles. While most are hoping for a buoyant recovery, others are still sceptical over the significance of this growth. Unemployment is still at record levels, and rising, with the prospect of it staying at 'severely elevated' levels for at least the following year.

Unfortunately, if we strip away all the icing and look closer at what this growth really constitutes then we see that government stimulus had an impact on the 3Q growth. Consumer spending went up 3.4%, but this was in large part thanks to consumers purchasing cars in the months July and August, with the federal 'cash for clunkers' policy. Sales have since receded to more realistic levels. The Economist from 29th October goes on in detail: "Residential construction leapt by 23.4%, the first advance since the end of 2005, helped by an $8,000 tax credit for buyers of new homes. But new-home sales dipped by 3.6% in September, as the deadline to qualify for the credit expired." The question is now, with the end of the stimulus plan creeping ever nearer, whether these government policies have actually done their job; can the economy now sustain the momentum that these stimuli have granted it?

Consumers don't seem to have much confidence in the economy or its supposed recovery. According to a survey commissioned by The Economist, 35% of respondents feel that the U.S. economy is actually getting worse and only 28% think it is getting better. While survey's such as these are not known to be accurate, if these kinds of ratios were applicable across the entire country then consumer confidence is something that will not be aiding economic growth. Some of the driving pillars now have to be consumer spending and business inventory investment.

Looking past temporary affects, there are genuine signs of recovery for the economy. The US experienced a growth in exports and investments. "Companies ran down inventories at a slower pace, a contributor to growth that should continue for at least two more quarters; firms have slashed costs deeply so that productivity has grown even as sales have fallen and Profits seem to have turned around already." (The Economist, 29th October 2009) To top it off the National Bureau of Economic Research predicts employment will follow by the first quarter of 2010.

It is now a matter of time while the effects of stimuli die out and we see the real progress of the economy.

F1 Withdrawal Suggests Dire Times for Japanese Carmakers

By Hussain Abdullah

Toyota announced its shock withdrawal from Formula 1 in the first week of November, citing the "economic downturn" as a reason. This has just been the latest in a mass exodus of Japanese car manufacturers pulling out of various motorsport leagues across the world. Toyota's rival, Honda, withdrew from Formula 1 last year citing the same reasons and abandoning the development of their 2009 car, costing a reported $1 billion and 5 years to develop. After selling their F1 division, their 2009 car went on to dominate the 2009 season in the hands its new owners, much to the dismay of Honda executives. Bridgestone, Formula 1's sole tyre supplier, has also announced plans to withdraw from the sport, pending the expiry of its contract in 2010. And it doesn't end there for the Japanese auto industry. Suzuki, Subaru, Mitsubishi and Kawasaki have all pulled the plug on their motorsport programs, citing the economic downturn as their reasons.

However, the situation seems to be graver than it first seems. Until recently, Toyota was the world's largest car manufacturer and only recently has it lost the top spot to Volkswagen and, at the same time, posted its first annual net loss in 60 years, of approximately ¥450 Billion, equating to roughly $4.9 Billion. This monumental loss has been described by Mitsuo Kinoshita, an executive vice president of Toyota, as "the bottom" of their worries. In comparison to the last profit it posted of ¥458.8 Billion highlights the effect that the economic downturn has had for the once robust carmaker. As the biggest car manufacturer at the time of the recession, it was hit hardest by the sudden downturn. Suffering a drop in sales of 31% in the quarter beginning 31st Dec, 2008 and an ensuing operating loss in the North American region, traditionally its most profitable market, has hit home hard. It has posted declines in sales for its European market, its weakest market, of 24% and in its domestic market it posted losses of 14%. It seems as though the procedures they have introduced thus far, are doing little to mitigate their losses. Despite streamlining their manufacturing process and cutting costs by 10%, postponing or cancelling the construction of plants worldwide and pursuing an overhaul designed by a specially commissioned Emergency Profit Improvement Comittee. In spite of this, analysts still believe that Toyota will get worse before it gets any better. It still has to address its pressing concerns of inventory and excess production capacity, before it can hope of being again, what it once was.

It's not all doom and gloom though, the North American auto market seems to be picking up, albeit with a substantially different demand structure. Even Toyota, has suffered no increase in the loss of sales over last year and is bullish over its prospects. It will need to appeal to a changed market and consumer-preference in order to see any real improvements.

Bretton Woods Reloaded?

By Stefania Mendoza-Guerra

A year ago, the escalating financial crisis was labelled the 'Worst Depression' since 1930s. Today, while the drama is slowly subsiding in advanced economies, developing countries see the crisis as the catalyst of the long-awaited global governance reform. Despite causing estimated cumulative losses of £2.5 trillion; this unlikely ally seems to have achieved what they could not: the International Monetary Fund, as we know it, is going down.

Created in 1945, the Fund still reflects the status quo of the post-WWII world. Rising powers have criticized the IMF for only reflecting the interests of the Western financial community. As a result of the crisis, band-aid economics cannot longer conceal IMF's inefficiencies.

"Bretton Woods is being overhauled before our eyes," declared World Bank's Robert Zoellick with reference to the G20 Pittsburgh summit decision to shift voting power within the Fund towards dynamic emerging markets and developing countries. The deadline for negotiations is January, 2011. And while disagreements over how to go about redistribution continue, substantial compromises were reached in Pittsburgh: 5% of the IMF's quotas (determinants of voting power) will shift away from overrepresented rich countries. This shift, along with the one approved in April 2008, will alter the balance of power significantly. However, a history lagging reform implementation creates doubts.

"The task of realigning quota shares with current global realities remains politically vexing," the IMF's board recognized. During a follow-up meeting in Istanbul, resistance from the developed world was observed in the rhetoric used, particularly from European countries who are the likely losers. Swedish Finance Minister, Anders Borg, warned that Europe could cut back its financial support if it lost influence over the Fund. European officials criticize Saudi Arabia and Russia's unrealistic voting power and U.S. de facto veto. Emerging powers, however, said the proposed change was not enough. BRIC (Brazil, Russia, India and China) countries, particularly, are demanding a 7% shift in voting power; and claim that no permanent funding for IMF's crisis scheme will be considered until the issue is settled.

Voting power is distributed as follows: U.S. holds about 17% of votes (which give them veto power), Japan has roughly 6% and, the E.U. owns 32%. China could become the second most influential nation if reform occurs. Thus, unsurprisingly, Beijing has shown renewed disposition to work with the Fund, while expecting a "reasonable automatic quota adjustment process" to "reflect changes in the relative economic positions of its members", a Chinese central bank official said.

Whether or not the shifting of quotas has an impact on the decision-making process is a complex question since most decisions in the IMF are in practice taken by consensus. China, for instance, despite its 3.7% of votes, has prevented the board from discussing its exchange rate. But, the votes could have some effect on the agenda-setting process.

Imbalanced voting power is only one of the many problems that hinder IMF functioning. An administrative structural reform that advances executive board's capabilities, provides better oversight, and encourages a more representative working staff is still desired.

The Economic Impact of the Lisbon Treaty

By Nikola Pejnovic

Any economic entity needs a structure. Without institutions and agencies, a market would have a hard time in achieving a non-arbitrage equilibrium. One could say that the invisible hand still exists in a form of a hand. The form shapes its ends – market solving itself. Lisbon Treaty has aimed at consolidating agencies and institutions in the EU. The treaty shall presumably solve the problem of blame Bruxelles. Now EU citizens will have a more direct influence on EU decisions as European Parliament will have more authority in EU decision making. Does this however change things from an economic perspective?

Primary properties of strong economic activity throughout the EU have already been acquired by the EU member states and beyond. The customs union has been established already, the freedom of movement of the workforce (with some exceptions among the latest two members), and gradual euro-isation of EU currencies have taken place already. The Lisbon Treaty does not add to these established treaties.

Then why were there so many economic arguments that the Lisbon Treaty is needed for Europe to move on? EU *acquis communautaire* legislation is already one of the most developed legislative standardisations amongst a group of countries. The problem does not really lay in the economics but politics. European Union citizens often wonder why some decisions are conducted in Bruxelles. EU member states enstated EU agencies and institutions that regulate and formulate regulations. As such, the EU has gained through years an impact on economy through its institutions.

Reforming and creating a more transparent delegation of power of EU member states therefore does impact economics. Having a united and single foreign representative and President position should gather stability and unity of the EU common market. The question is will the EU manage to maintain one stance. A more united market, even seeming such, may foster better economic growth. EBRD lowered its operations in Romania and Bulgaria shortly after their EU accession. The countries still had a gap in transition in practice yet officially on paper they complied with the Maastricht criteria. The economies of eurpoe thus follow the political instrument.

Perhaps one can say that the biggest danger was the Lisbon not passing. Many from Merkel to Sarkozy advocated that without Lisbon, Europe is lost. Such statements directly disrupt the economic mood and awaken uncertainty. These disruptions do not have to be pandemic as those of early 1990s, yet a few percents in an economy can create much disruption. This is evident today in the light of the global recession.

Nonetheless, Lisbon Treaty does bring order and legitimacy in certain competences. The European Union shall as of 1st of December have a direct competence over agreements that were already signed into treaties. Customs union, internal market regulation, competition rules, commerce policy, and euro-countries monetary policy. All these are now de facto in control of Bruxelles, which is monitored by EU citizens in a representation of 1 to 751 seats.

Even now when the entry effect of Lisbon is clear, we observe that the Lisbon does not solve economic insolvencies of the continent. As the crisis arrived, Germany quieted down on the political scene and began solving its problems. Poland highlighted the only growth of GDP on the continent, while Ireland and Spain unemployment had a trapeze jump in the air. The EU is economically unconsolidated; the political integration is plausible yet ineffective alone.

There are still barriers though in the development of economic unity and cohesion. The GDP differences between members are still vast. The taxation can create arbitrage pricing, while multiple stock markets still exist with a nationalist sentiment to maintaining them. Europe is walking on a beautiful path. The Lisbon Treaty is one leg forward, the political one; next comes the other leg, the economic one. Europe – do not lose the momentum.

How to Salvage Copenhagen

By Charles Hodgson

Al Gore won the Nobel Peace Prize in 2007 for his considerable work in the fight against climate change. Two years later, the same award has been inexplicably given to Barack Obama, who has since proceeded to scupper the world's best chance to make progress in that same fight. The Copenhagen conference which will occur on the 7-18th December was supposed to usher in a new age of international cooperation in the fight against global warming. Perhaps we believed this because it was announced while the world was still riding the wave of optimism that followed Obama's election. One year later, the hope that this new breed of president could reverse the damage caused by America's stubborn refusal to ratify the Kyoto Protocol under George Bush has all but dried up. With the conference just weeks away, the likelihood of Obama even attending, let alone signing any kind of agreement, is slim.

The announcement on the 15th of November that no agreement would be reached at the conference was simply a confirmation of the defeatist mood that had been circulating in the press for several months – Obama's pre-election commitment to fighting climate change would come to nothing this year. The recession has proved deeper and longer than anticipated when Obama was elected, and as a result the American public has no stomach for potentially growth-stunting anti-emissions measures. Indeed the climate lobby is still viewed as a fringe political movement by many.

At the very least, Obama could not be accused of hypocrisy. The government's financial support of GM, and implicit promise that American heavy industry is 'too big to fail' would seem completely inconsistent with what the US business community would view as a command and control regulation. In fact, gradually implemented cap and trade schemes would do little hard to the US economy, when these heavy industries are the weakest sector in the economy. Protecting inefficient, not to mention polluting, industries can only serve to lengthen the recession. For America to truly revive its growth, resources must be directed away from unproductive industries such as automobiles and towards productive ones. It is a happy coincidence that America has a distinct comparative advantage in 'green' high technology and services industry, and a disadvantage in polluting heavy industry. A cap and trade system, paired perhaps with tax breaks for clean businesses, might actually hasten the economy's recovery.

However, this argument would not sit well with the American voter. The idea of America's economic strength is inexorably linked in the American mind to names like Ford and GM. Obama's 'liberal' commitment to protecting jobs in established American industries, especially during this crisis, clashes with his 'liberal' posturing on climate change. When push comes to shove, the more populist policy by far is to subsidise polluting industries and ignore international calls for action.

What limited prospects there are for progress at Copenhagen lie in the remaining possibility of Obama actually attending. There is considerable pressure from America's European allies for action on climate change, and even China and India are becoming concerned, given that most of the burden will fall on them. Obama not only has his domestic popularity to consider, but also his position abroad, which is in a delicate position following his 're-launch' of US foreign policy. This conference could be a fulcrum point. If he attends, Obama could cement the mood of international cooperation that he has been trying to revive. On the other hand, if he does not attend, Obama might sour his allies and impede his foreign agenda.

Essentially, the Copenhagen Conference has already failed. There will be no agreement on emissions, no international cap and trade system, and no dawning of a new age of international cooperation to save the planet. However, the possibility remains for Obama to salvage the conference to make it a stop gap on the way to an agreement in the (possibly distant) future.

COMMENT

UK Debt Not as Bad as it Seems

By Raj Rabheru

The political spectrum in the UK has entered a somewhat surreal period, where both parties seem to be squabbling over who can cut public spending and raise taxes in the fastest and most brutal manner. This exchange has largely been a response to doom-mongers, which seem to think that the fate of the UK economy is destined to end in failure as a direct result of the Government finances. While the debt levels of the UK government must be addressed in the long run, an objective analysis of the government finances, relative to other countries, suggests that there is no reason to be panicking in the midst of a recession, and making rash decisions about government spending and taxes that could hinder the recovery of the UK economy.

The UK went into this crisis with levels of government debt that were much lower than the majority of other major economies. UK government gross debt relative to GDP stood at approximately 50% at the onset of the recession, while the US had a level over 60%, key members of the EU such as Germany and France had a level in the range of 65-70% and Japan closer to 170%. Despite the argument that the UK government should have been thriftier during the boom, it is clear that government debt was quite modest relative to other Western economies at the time and that it entered this crisis on a relatively favourable level of debt when compared to these other countries.

The IMF now forecasts that the UK will end 2009 with a level of government gross debt close to 68.7%. While this is a vast increase, it is still less than the forecasted levels for other advanced economies, including France (76.8%), Germany (78.7%), Japan (218.6%) and the USA (84.7%) – analogous figures are also available for net government debt. What is clear from these figures is the level of UK government debt as a proportion of GDP is likely to remain lower than its peers during 2009 – there does not seem to be any good reason why the UK is likely to face larger repercussions, directly as a result of its level of government debt, than other advanced economies.

We can gauge the degree of concern which markets place upon the level of UK government debt by looking at the interest rate on UK 10-year gilts. The interest rate at the time of writing stood at 3.8% and this figure does little to suggest market concern, if we consider that the rate stood at over 10% during the early 1990s. Critics of this argument would suggest that this rate is artificially low as a result of the quantitative easing policies of the Bank of England. However, most independent estimates of the effect of this policy believe it reduces yields by around 0.5%. Therefore, in the absence of quantitative easing the interest on a UK 10-year gilt would be likely to stand at around 4.3% – still a fair distance form a level that would constitute a level of significant concern about the UK finances.

Samuel Brittan made a similar remark recently in the FT by putting the government debt figures into their historical context. He stated in reference to the UK economy that "Debt ratios of this size are historically far from unprecedented" and drew reference to the ratios in the Victorian period of 200% and in 1956 of just under 150%.

Overall, an analysis of the fundamental government debt figures seems to show little support towards calls for brash actions from policymakers and the danger of a premature tightening of the government finances, before the crisis is over, is a significant one that should not be underestimated. Calls for policy makers to cut spending and raise taxes immediately, seem to be the result of no more than a proverbial game of Chinese whispers, where the first person states that the levels of government debt must be dealt with in the long run and the last person somehow receives the incorrect message that the solvency of the UK government is at risk unless cuts are made immediately. The UK government should not fall into the trap of tightening the government finances before the UK economy is firmly on the path to recovery.

Cartoon: James Gilray (1786): King George raids the Treasury to pay off the Royal Debt

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Flying Passports of Convenience

The Economic Problem with Citizenship

By Karl T. Muth, Visiting Student from the University of Chicago

From both legal and economic perspectives, the framework surrounding nationality, citizenship, and passports is outdated and inefficient, and should be replaced in its entirety.

This Essay operates on a set of six basic assumptions: first, that in a law and economics framework, citizenship should be viewed as a property right akin to an option contract (1); second, that passports are merely the physical manifestation of this property right, much as a stock certificate represents an interest in a corporation; third, that there exists a marketplace for citizenship and that sovereign nations must market their citizenships to individuals who can choose rationally between them; fourth, that switching costs and legislative barriers that currently prevent efficient changes in citizenship will disappear over time; fifth, that there exists globally a talented class of individuals with high marginal product of labor (and the ability to extract concomitant wages) and high market productivity (as investors, negotiators, arbitrageurs, creators of new instruments, etc.); and sixth, that this class (the "talent class") is currently constrained by laws regarding citizenship.

Certain citizenships better suit individuals with particular incomes, investment strategies, entrepreneurial plans, or travel itineraries. It seems very unlikely, from a statistical perspective, that citizenship is ideally distributed throughout the marketplace based upon the geographical accident of where an individual happens to be born (2). The ancient doctrines of *jus sanguinus* (3) and *jus soli* (4) were never designed to facilitate the ideal distribution of citizenships for economic productivity purposes. Hence, some individuals will undoubtedly want to change their citizenship from that of their country of birth to some other state that better suits their needs. Currently, residual tax liability may remain due to inefficiencies in the process of abandoning one country's citizenship and acquiring another's (5). The individual may bear a substantial switching cost. Although it seems likely (6) nations will increasingly bid against each other for the most desirable citizens as the barriers to changes are eliminated, subsidizing or eliminating these switching costs, that is not yet the case (7).

> "Citizenship should be viewed as a property right akin to an option contract"

As part of this transition to a more agile citizenship marketplace, individuals must be educated that the affiliation represented by citizenship is chiefly economic. Most individuals who will change their citizenships frequently will have substantial resources at their disposal and little need for social services (8). The arguments for geographically assigned relationships between nations and their citizens are tenuous at best, particularly when those citizens consume no traditional services. Geography no longer binds the servant to the master, the worker to the employer, the customer to the merchant, or the audience to the musician. The last surviving of these antiquated ties joins the citizen to his nation.

In business dealings, individuals (9) must be allowed to choose the citizenship that best suits their investment strategies, whilst minimizing transaction costs and tax liabilities (10). Much as a ship flies a flag of convenience (11) in order to avoid inconvenient environmental regulations or expensive tonnage tariffs, an individual should be allowed to ally himself with a nation that provides the services and regulatory environment (12) most advantageous to him. Quickly, nations will

specialize, offering citizenship options that suit certain industries or certain types of deals. The finance, legal, and accounting services related to that country's area of focus (not necessarily located in that country) will likewise specialize in that area.

Those forming a corporation in the United States may choose between Delaware, Nevada, or another state as the legal home of the nascent entity. Similarly, at the beginning of a new venture, the principals of that venture should consider which citizenship would most benefit them personally, examining jurisdiction and conflict of laws issues (13), host country protection in bankruptcy (14), potential tax liability (15), and other factors. The flexibility to choose a citizenship from year to year that caters to one's needs is particularly important to the venture capitalist or entrepreneur who may need to position himself to enjoy maximum gains from short-term investments.

> "For citizenship to be useful, countries must differentiate themselves, specialize, and attract the best citizens"

Eventually, as nations compete and switching costs fall, sovereign states should adjust their laws and attempt to attract the best citizens (16). The best citizens, in this case, are citizens complementary to the state's other citizens, and to the state's strategy more generally. Ideally, these citizens will react positively to, and be economically or philosophically aligned with, the incentives the state is in a position to provide on an ongoing basis. Where a state can offer a given incentive, and where that incentive has value to the individual, the individual will choose to immigrate. Where the policies of the state increase net income, or facilitate a higher marginal product of labor for the individual, or offer a lower effective tax rate, the individual may elect to remain a citizen in future years. Individuals irrationally (17) loyal to nations offering inferior bargains will absorb higher fixed costs and higher transaction costs, eventually being forced to make wiser choices or be relegated to one of the least desirable states (18).

The current system in the majority of countries consists of so-called progressive tax rates that create no stake in governmental efficiency. In many countries, such as the United States, a substantial segment of the population pays no taxes, while citizens with the highest wages are burdened with costs inflicted by others' consumption of services. In the status quo condition, the poor profit and workers with the highest marginal product of labor leave. The emergence of a transient talent class of workers who are interested in investments and ventures around the world would not only add to net productivity, but would directly attack two of the great evils of our time: protectionism and nationalism (the latter occasionally optimistically termed "patriotism" by its proponents).

Both protectionism and nationalism feed inefficiency by creating wholly irrational barriers, loyalties, and policies. These inefficiencies would be arbitraged away by innovative entrepreneurs and investors of the talent class, a group different from any seen today. Never before has there been a substantial number of individuals in a position to exploit and erode international choice-of-law inefficiencies. This group would serve as a market maker in attractive legislation, rather than simply a hypermobile plutocracy. Nations that refused to deal with the talent class – for instance, by denying property rights to non-citizens or making unreasonable laws to protect against exploitation of their natural resources – would either become economically isolated, or forced to participate at a premium rate marginally greater than the net present value of the property or resource in question if put to the highest domestic productive use. Because this rate will be, in almost all cases, lower than the rate of productivity that exploitation by the talent class would yield, the talent class would happily pay this premium in order to exploit the resources in question.

For the concept of citizenship to be useful at all in an economic sense, countries must differentiate themselves, specialize,

and attract the best citizens. The goal, in attracting this talent class, must not only be to create tax havens, but also to maximize innovation, entrepreneurship, creativity, and wealth creation. States that persist with the goal of maximizing tax revenue or balancing budgets that do not offer any significant benefit to their most productive citizens are merely the modern equivalent of feudal lords – demanding an annual tribute and providing little in return.

Notes:

1. This option allows its holder to exercise certain rights of travel, to engage in transactions, to appeal for protection by the sovereign state's military and courts, and so on.
2. See Amanda Colvin, Comment, Birthright Citizenship in the United States: Realities of De Facto Deportation and International Comparisons Toward Proposing a Solution, 53 ST. LOUIS U. L.J. 219, 244 (2008) (discussing, briefly, jus soli citizenship rights comparatively).
3. Law of blood, historically referring to father, but now to the parents of the individual. This doctrine suggests that children inherit their citizenship from their parents.
4. Law of soil, a doctrine suggesting that children adopt the citizenship of their place of birth.
5. Steven J. Arsenault, Surviving A Heart Attack: Expatriation and the Tax Policy Implications of the Exit Tax, 24 AKRON TAX J. 37, 57-64 (2009).
6. Some may argue that nations will increase switching costs to "trap" valuable citizens, but unless this action is taken synchronously and nearly unanimously, it is unlikely to succeed, as attractive destinations with ample subsidies for desirable citizens will remain.
7. See, e.g., Simonetti Samuels, Infant Formula WIC Rebates: Altruism or Exclusionary Practices?, 2 J. PHARMACY & L. 185, 206 (1994) (observing, as many have in other markets, that "[c]ompetitive bidding systems may reduce switching costs").
8. These individuals may, instead, value other services the local legislature can provide, such as financial markets deregulation, stronger bank account privacy rules, or decreased enforcement of antitrust, insider trading or consumer protection laws.
9. Robert Lenzer & Philippe Mao, The New Refugees, FORBES, Nov. 21, 1994, at 131.
10. See Michael S. Knoll, Taxation and the Competitiveness of Sovereign Wealth Funds: Do Taxes Encourage Sovereign Wealth Funds to Invest in the United States?, 82 S. CAL. L. REV. 703, 750 (2009) (describing use of overseas derivatives to avoid all source country tax liability); see generally Avi-Yonah, Clausing & Durst, Allocating Business Profits for Tax Purposes: A Proposal To Adopt A Formulary Profit Split, 9 FLA. TAX REV. 497 (2009) (discussing firms with international operations and entities, tax implications of same); Olivia Chung, The Lopsided International Investment Law Regime and Its Effect on the Future of Investor-State Arbitration, 47 VA. J. INT'L L. 953, 957-59 (2007) (discussing how investors make overseas decisions).
11. A national affiliation of a seagoing vessel employed to reduce costs or regulatory burdens. Craig H. Allen, Revisting the Thames Formula: The Evolving Role of the International Maritime Organization and its Member States In Implementing the 1982 Law of the Sea Convention, 10 SAN DIEGO INT'L L.J. 265, 269-70 (2009); see also Hans H. Hertell, Arctiv Melt: The Tipping Point For An Arctic Treaty, 21 GEO. INT'L ENVTL. L. REV. 565, 572 (2009).
12. See Anupam Chander, Trade 2.0, 34 YALE J. INT'L L. 281, 310-11 (2009) (discussing migration toward better-suited jurisdictions).
13. See generally 1 JOSEPH H. BEALE, A TREATISE ON THE CONFLICT OF LAWS § 8A.10 (1935).
14. See John Armour & Douglas Cumming, Bankruptcy Law and Entrepreneurship, 10 AM. L. & ECON. REV. 303, 308-09, 314-16 (2008) (discussing varying implications of bankruptcy for entrepreneurs internationally).
15. See Carlo Garbarino, An Evolutionary Approach to Comparative Taxation: Methods and Agenda for Research, 57 AM. J. COMP. L. 677, 689-93 (2009) (offering comparative analysis of pertinent issues).
16. See Robert B. Ahdieh, The (Misunderstood) Genius of American Corporate Law, 77 GEO. WASH. L. REV. 730, 739 n.48 (2009) ("If there are low switching costs, ease of entry, no legal barriers, abundant choice, and so forth, or if the market for law can be improved by adjusting the process of lawmaking [then a competition and choice market framework applies instead of an imposed regulatory framework.]").
17. Due to patriotism, nationalism, tribalism, or other irrational factors.
18. Cf. GARY BECKER, THE ECONOMICS OF DISCRIMINATION (1957) (positing that firms irrationally paying premium for white workers while refusing to hire competing black workers offering same productivity will experience higher costs and be driven from market).

Redecorating in Red

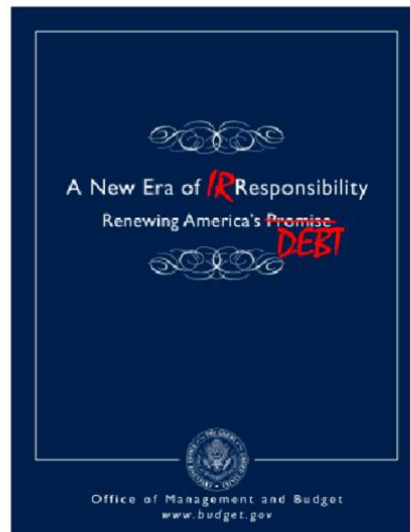
The 2010 US federal budget and the impending fiscal crisis

By Daniel Jensen

President Obama's new 2010 budget has a tone of solemn responsibility. Titled "A New Era of Responsibility," it alludes to judicious planning and sage forecasting. The carefully crafted message appeals to American sensibilities precisely as it was designed. But paradoxically, for all its poignant rhetoric about conscientious financial planning, the 2010 budget steers the U.S. even more sharply toward economic disaster. In context, wasteful spending and overly optimistic forecasts are only its minor flaws. It is the budget's unrestrained deficit spending and its failure to prepare for Medicare's massive upcoming insolvency crisis that makes it a reckless course indeed. Worst, Obama knows it.

Obama was offering his remarks on the preliminary 2010 budget when he declared, "There are times where you can afford to redecorate your house and there are times where you need to focus on rebuilding its foundation. Today, we have to focus on foundations." The 2010 budget, however, seems to give attention to both rebuilding the foundation and redecorating the house. Ostensibly foundational is "a $250 billion contingent reserve for further efforts to stabilize the financial system," as well as the elimination of certain subsidies and the levy of new taxes. Funding is also provided for increased financial regulatory supervision. However, the allure of redecorating seems to have been too strong to deny – agency discretionary spending is budgeted to increase by 6.7% over 2009. (That is not including Recovery Act expenditures, which make for a one-year increase of a whopping 31.9%.) What are these redecoration costs paying for? Among other things:

- Doubled foreign aid expenditures ($25 billion)
- New weather forecasting satellites and climate centers ($1.3 billion)
- Increased rural access to broadband internet ($1.3 billion)



The budget even provides $475 million for accelerating the restoration of the Great Lakes. In short, much of this new discretionary spending is "redecorating," and superfluous to the foundational goal of boosting American economic performance. It does little more than paint a fresh coat of red onto the budget. This comes as no surprise - there is extensive precedent for expansions in government spending paying for indulgences of all sorts. However, it comes at a time that the U.S. absolutely cannot afford such excesses.

Deficit spending in 2009 will account for 44% of total federal outlays. It is projected to cost a staggering $1.75 trillion, equivalent to 12% of U.S. GDP. This is almost four times larger than the short-lived record deficit of $459 billion set by Bush in 2008. It will immediately push the U.S. national debt to $17.6 trillion, or 119% of GDP, a potentially ruinous height that shatters the record of 109% set in the immediate aftermath of World War II.

Remarkably, Obama repeatedly acknowledges the dangers of his vastly expanded deficit spending within the budget document itself. He writes, "These deficits, over time, will harm economic growth and impose burdens on our children and grandchildren... This is an extraordinary response to an extraordinary crisis, and as we come out of this recession, we must return to the path of fiscal responsibility... we cannot see this as a new norm." Obama has pledged to "cut the deficit in half" by the end of his first term in 2012. This promise is not so remarkable as it might seem. Cutting a $1.75 trillion deficit in half still leaves a deficit of hundreds of billions, yet that is where Obama's deficit-cutting promise ends. After 2013, the deficit is projected to march steadily back up at a nominal rate of 5% per year (see Figure 1). This will keep it at a steady value of about 3% of GDP. Where the forecast ends in 2019, the national debt stands at 127.7% of GDP and the still-rising budget deficit at $712 billion (3.1% of GDP). The lowest Obama projects the deficit to go in the next 10 years is 2.9% of GDP in 2018. So while Obama is conscious enough of the danger of deficit spending to call for it to be addressed, his budget will actually exacerbate it.

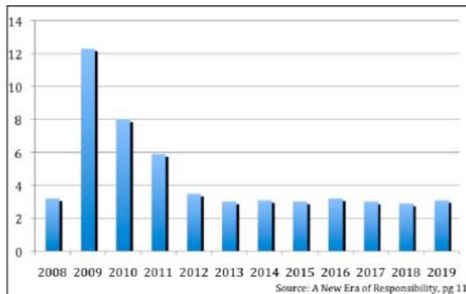


Figure 1 Projected U.S. Fiscal Deficits as % GDP

What is worse, the budget misjudges the deficits on both the cost and revenue sides. Costs have almost certainly been underestimated for health care reform, jobless claims and toxic asset buyouts, to name a few. For example, the budget establishes a $630 billion reserve fund for health care reform and makes the optimistic claim that through cost-cutting on existing programs and raising taxes on the wealthy, it will have zero net effect on the budget. There appears to be some wish-

Figure 2 U.S. 10-Year Treasury Bond Yield (1962-2009)

ful thinking here, as not every inefficient dollar can be squeezed from Medicare and not every wealthy taxpayer is going to continue mailing checks to Uncle Sam after they begin to slide down the ugly side of the Laffer curve. Plus, the 36 million Americans to be extended "free" health care coverage represent the worst health demographic in the country. They include all Americans unwell enough to be refused private care, plus the poorest of the poor. Fulfilling an obligation to care for their below-average health is likely to cost far more than predicted.

"The 2010 budget steers the U.S. even more sharply toward economic disaster."

Conversely, revenue projections are grossly exaggerated. It is hoped a vibrant recovery will lead to GDP growth of at least 4% in 2011, 2012 and 2013. Even the lowest GDP growth projected by the budget in the next 10 years is a whopping 2.6%, and that for five years straight; from 2015 to 2019. (Ironically, the average GDP growth rate between 2002 and 2007, the debt-fueled growth years that spawned the mortgage and financial crises, was also 2.6%.) There is reason to believe the outlook is not so rosy.

Experts on the U.S. economy, including Nobel prize winning economists Paul Krugman and Joseph Stiglitz, have been warning of a slow recovery for many months. In some of the first high-profile comments about the U.S. economy since the 2010 budget was released, Janet Yellen, President of the Federal Reserve Bank of San Francisco, used phrases like "tepid recovery" and "slow rebound" to describe the U.S. economy's prospects. Her words were effectively a condemnation of the predictions made by the budget. According to Yellen, "our recovery is likely to feel like something well short of good times." She outlined problems in commercial real estate, labor market and unemployment challenges, and constraints on consumer spending. Her words come as little surprise in light of similar sentiments being aired in other G-7 countries about their own economies. In November alone, Germany's Chancellor Angela Merkel and the Bank of England's Governor Mervyn King both issued statements revealing expectations of a long and slow recovery.

In short, the GDP and revenue forecasts of Obama's 2010 budget are little short of a fantasy scenario. Revenues will likely be lower than predicted. Therefore, in turn, the deficit and debt figures have been significantly underestimated as a percentage of GDP.

Clearly there are holes in the 2010 budget, as well as a complete failure to address untenable levels of deficit spending. These, however, only serve to set a bleak stage for perhaps the biggest complication of all; the arrival in 2017 of the long-foretold insolvency of Medicare's Hospital Insurance trust fund.

"Cutting a $1.75 trillion deficit in half still leaves a deficit of hundreds of billions, yet that is where Obama's deficit-cutting promise ends."

Medicare's dilemma is a combination of increased costs and decreased capacity to pay. Baby boomers will be retiring in great numbers in the next decade. That means not only a greater financial burden on a Medicare system that already spends more than 3.2% of GDP, but a demographic shift in the "dependency ratio" of retirees to people in the work force. The dependency ratio will be approximately 20% in 2010, but will nearly double to 37% by 2036. So the demographic trends are stacked against Medicare both ways; At the same time there will be more pensioners enjoying new benefits, there will be relatively fewer Americans working to pay for those benefits.

For the first time, due to yet another forward revision by Medicare's board of trustees, Medicare's projected insolvency date has fallen within the 10-year federal budget forecast window. According to the board's most recent report, in 2017 costs will outstrip the combined value of revenues and trust fund assets by 23%. Benefits payable "would decline from 81 percent in 2017 to about 50 percent in 2035 and 30 percent in 2080." The combined unfunded liabilities of Medicare and Social Security over the next 75 years is estimated at $107 trillion, or almost 700% of GDP. The board offers two potential long-term solutions for the Medicare side of the problem:

1) Increasing Medicare's payroll tax deduction by 134% (from 2.9% to 6.78%)

2) Reducing total Medicare expenditures by 53%

The extremity of these measures gives some implication of the truly dire circumstances Medicare is in. By any measure, it will be a very expensive problem to fix. If left unaccounted for until the last minute, the Medicare insolvency will spell serious trouble for the American economy. Yet the budget makes no mention of this crucial event, much less allowance for it. Alarmingly, President Obama is

fully aware. After all, the man he appointed as Secretary of the Treasury, Tim Geithner, is also Medicare's Managing Trustee.

What is the greatest risk of the Medicare crisis further burdening a balance sheet that has already suffered so many years of negligent budgeting? Quite simply, default. Easily the largest in history, it would dwarf Argentina's standing record from 2001. It would likely be brought about by a change in investor confidence, and would spell the end to an era of historically low Treasury bond yields (see Figure 2). Today's super-low yields would not be enough to compensate for the increased perceived risk, and higher premiums would have to be offered.

With the U.S. debt at 107% of GDP in 2009, and 125% in 2011, debt servicing costs are going to be high. In 2008, on a debt of 78% of GDP, servicing costs accounted for 6.6% of all federal spending. Simple math leads to the conclusion that at a debt level of 125%, servicing costs will rise to 10.6% of spending. And that assumes premiums would remain at rock-bottom levels. If premiums were to return to the levels seen in the economically difficult 1980s, debt servicing could consume a full 25% of federal spending. How could a deeply overextended budget, already laboring to support swelling entitlement payouts and 3% deficits, possibly accommodate such a burden? It couldn't. Then the vicious cycle of a "debt trap" would begin. Unable to easily service the payments on its existing debt, the U.S. would be forced to take on additional debt, which would scare investors into demanding even higher yields. This vicious cycle inevitably ends in default.

"The looming Medicare crisis and the burgeoning federal debt do not coincide well with Obama's ambitious agenda."

In the delicate economic climate currently prevailing, practically anything could cause investors in sovereign debt to spook:

• Japan, already caught in the debt trap of untenable interest payments requiring the accumulation of ever-greater debt, is facing rising bond yields, an imminent ratings downgrade and potential default. As the world's second-largest economy, this is precisely the type of event that could cause a system-wide panic.

• In November, ratings agency Fitch warned that the United Kingdom was next on the chopping block for its AAA rating since Ireland was downgraded in March. At the very least, these signals contribute to increased investor anxiety and upward pressure on bond yields worldwide.

• The U.S. could even be sabotaging its own debt position. A 2002 study by Gale and Orszag concluded that for every 15% increase in the U.S. public debt ratio, there is a corresponding increase of between 0.5 and 1% in the real interest rates in all industrialized countries. If this "spill over" effect is real, the 60% jump in the debt ratio by 2011 will push real interest rates up by 2-4% in the industrialized world. This too could precipitate a dangerous rise in bond yields.

The looming Medicare crisis and the burgeoning federal debt do not coincide well with Obama's ambitious agenda. Remarkably, he and his cabinet have repeatedly acknowledged Medicare and the national debt as being serious threats to American economic integrity. Yet his agenda items are taking precedence over a response to these fundamental issues and the critical threat of default they represent. In fact, much of his agenda blatantly aggravates the risk of default. So far, Obama has failed to responsibly pilot U.S. fiscal policy away from its dangerous trajectory. Yet there might still be time to change course and save the economy from the increasingly painful adjustments being fostered by further delay.

In a 2004 report titled "U.S. Fiscal Policies and Priorities for Long-Run Sustainability," the IMF explained that the U.S. was facing a rapidly closing "window of opportunity" to address its impending debt crisis. This is because "reforms of entitlement programs [like Medicaid]... tend to require long lead times." There is some chance that the U.S. is still within that window for reform. Without quick action, President Obama risks bringing the worst kind of change to the American economy, and the world. The 2010 budget should be scrapped in favor of one responsive to the realistic fiscal burdens the U.S. faces – one that will stop wasting money on redecorating and truly "focus on the foundations."

What Can we Learn from Financial Guernica?

Lessons from the financial crisis

By Vyacheslav Polonski

Just imagine for a moment the massacre of Guernica taking place in the modern world - scared people flight in panic from an unseen danger, crying and yearning for salvation. Shocked by the course of horrific events, the people are overwhelmed by unexplainable forces, whilst in the background houses and the towers of banks catch fire and collapse. This horror scenario was painted by Thomas Willmann in fall 2008. The title of the tableau is "Financial Crisis" (Pictured). An allusion to Picasso's famous "Guernica," this picture depicts the most dominant driving force in every human mind in the current economic situation: Fear! It is the particular fear of losing one's job or the more general dread of becoming one of the billion victims of the world economic crisis. And since there is fear and loss, there will always be a scapegoat to blame. This time, at the beginning of the 21st century, it's the banking business in general and the investment banking managers in particular. Abruptly they have become blamed by society as the "roots of evil" and the "incarnations of immorality" – the new Nazis of Guernica. People now say: "Businessmen ought to become philosophers." But it is wrong to make these managers responsible for the consequences of the crisis, and worse still to expect of them something that is not their duty.

"Why is there so much economic misery for thousands because of the selfishness of a small banker elite on Wall Street?" People around the world do not pose this question without reason. The impact of the global economic crisis is indeed palpable everywhere. The collapse of the financial sector, the decline in economic growth, the deficit in demand, the credit shortage and the higher unemployment rates have resulted in an overall depressive feeling and even rising suicide rates. People are deeply disappointed in business and capitalism. Since there were so many things that went wrong, it is said, conclusions ought to be derived from this crisis now, in order to avert the next economic breakdown. So people have ardently blamed the managers for their economic sleight of hand and their all-conquering selfishness. The overall atmosphere tended to shift to the left. Marx and Engels were close to becoming bestsellers again, and a vast majority agreed on the statement that an "economy was condemned to fail without morality."

> "How can we establish some sense of humanity in business, without cutting short its freedom and its profits?"

Though, if you asked one of them how they would define morality, lots of them would stop short and hesitate with their answer. After some consideration, they might have stated that businessmen should have acted for the public good, rather than egoistically serving themselves. They might say that managers should never behave out of self-interest, but should always consider the interests of their country, or even the human race as a whole. Some might refer to Kant and claim that people should be treated never as a mere means, but always as an end in themselves. What these people want is "social responsibility of business." This trend urges managers to adhere to certain principles of ethically "good" behaviour that are not necessarily enforced by law, but are considered an assumed responsibility. Rapidly and seemingly without friction this opinion made its way from the moralists' mouths to the journalists' ears to the peoples' minds.

Opponents of social responsibility in business cite Adam Smith, who explained that if every individual pursues his or her own self interest in business, the greater good for the society will be achieved. They also reiterate Milton Friedman, who said "the social responsibility of business is to increase its profits," not to play the moralist or try to pursue the public good. Friedman goes so far as to say that social responsibility in business can

actually act contrary to the public interest. These thinkers claim that only individuals are entitled to a sense of social responsibility, not businesses. The task of a hired manager is to run a company profitably and benefit shareholders, not society at large. It is not his own money that he invests but rather that of the company's owners. By investing money into so-called social responsibility, a manager would essentially be choosing to levy "morality taxation" on his own company's shareholders. Such taxation might be not in the interests of the owners and would therefore be neither economically nor ethically desirable. Besides, social responsibility of business would lead to less profitable deals, since business would be obliged to spend more money on social purposes and thus would be less efficient. Ultimately, opponents of social responsibility in the corporate world argue that this belief cannot be implemented without restructuring the entire system of business. The question is: How can we establish some sense of humanity in business, without cutting short its freedom and its profits?

According to Smith, the public interest may be served with the help of business, indirectly. From there, the answer is simple: require ethics in business in same way we ensure a fair game of football. Can a football player be blamed for trying to achieve the best possible outcome for himself and his team? The answer is clearly "No." Although the football player pursues his own self-interest, he is required to play by the rules of the game. These rules are defined beforehand to ensure, in the public's best interests, a fair game. Therefore, serving the public interest in a football game includes the definition of the goal of the game, a set of rules that ensures fair play without excessive violence and, most importantly, clear directions to follow in exceptional situations. Thus, as long as everybody plays by the rules of the game, selfishness cannot create an unfair game that is bad for the public. By requiring that everyone play by the same rules, no players can lose simply because they decide to do the "right" thing.

The definition of rules of the game for business takes place on the institutional level. It can be difficult to coordinate change at this level, and it is not always simple to define rules such that the public interest is served. Morally good behaviour in business actors can only be created by the most effective and canny rule-making. This is not without its obstacles.

There is a seemingly unsolvable paradox that those who design the rules for business are players in business, too. This means that they may exploit others through information asymmetries and may create abuses of market power through monopolies or cartels. For example, the delegates of the G20, who intend to set new rules for the global financial market, each have their own particular interests in the development of new regulations, so they are not free from bias. Consequently, impartiality is required for those who design the set of rules. This impartiality can be best achieved by rational deliberation. In order to ensure justice, rules must be designed behind a thick veil of uncertainty, as Buchanan proposed following the idea of Rawls' veil of ignorance. Behind this veil of uncertainty, which is less thick than Rawls' concept and closer to reality, people do not know their exact position and their concrete interests in the future. For that reason it is likely that they will define a set of rules that will ensure a level playing field for everyone. This includes two major aspects: a) that fundamental rights are guaranteed to everybody with no distinction of racial, religious or social background, and b) that even those who are worst off would be advantaged from accepting these rules over those of the previous system. The incentives must be set in a way that will make room for required ethical behaviour, in lieu of making it an optional burden. In other words: Morality would be achieved through ethically desirable law together with the personal wish to maximize profits.

> "All businesses need to do is play within the rules that are set for them."

In modern, liberal democracies there are plenty of examples for such law-making or rather law-guarding institutions. One example is the Competition Commission: It is not in the interest of the majority of participants in markets to be thrown from the market by cartels. Therefore the impartial institution designs the positive law, which forbids cartels to destroy competition. Participants are thereby required to serve the public interest on the free market. The economic crisis teaches us that these rules, elaborated to an extent, could prevent economic misery. The current set of rules and the mechanisms that control the compliance with these rules are not enough. Thus, rules of the game must shift and must be designed by impartial spectators, the institutions, with regard to the public interest and the moral values demanded by the public. Only when placed inside a framework of moral rules unlike the framework prevalent now will market players behave ethically. For example, by placing clear incentives for sustainable development and making pollution extremely expensive, business will be encouraged to be more responsible in its use of resources and its pollution of the environment.

The alternative to this institutional ethics approach is a self-evident virtue approach. The rational way to avoid the divergence between individual interests of managers and the interest of the company, is not only to fix the mentioned loopholes in the set of rule, but also to establish a culture of virtues in companies, since they would accelerate the process of the establishment of coordination rules e.g. virtues like a sense of proportion and justice, trust and confidence. These virtues must be derived from reason and must be controlled by conscience. If managers imbibe virtues from their time at business schools or universities, they would be able to anticipate upcoming problems or abstain from taking additional risks. Subsequently, institutions would be able fix the loopholes in the set of rules. So each approaches props up the other. Without virtues institutions are pointless. Without institutions virtues are helpless.

So here are the conclusion that can be drawn from the global economic crisis: (i) Although society, which faces grave economic misery, demands the direct involvement of business in social issues, clamouring for more social responsibility of business, (ii) such a direct involvement in social issues will cause inconveniences for business by restricting its freedom and burdening it with additional costs. (iii) Instead business should pursue its own self-interest and thereby serve the public interest by simply playing by the rules of the game, (iv) which are to be designed by impartial institutions – the government – in the form of self-enforcing legislations with moral values incorporated into the set of rules. If every participant on a free market would act upon these rules and (v) adhere to a culture of established virtues, the next economic crisis could be prevented and there would be no reason to fear or to blame business for their so-called immoral behaviour. Bankers are not Nazis. Willman's tableau "Financial Crisis" would never turn into reality and will remain a horror confined to a piece of canvas. So Businessmen don't need to become philosophers – all they need to do is play within the rules that are set for them.

The Economics of Slacking

Economic Incentives for Studying and an Exercise in Discounting

By Aneil Baron

Now, more than ever, students around the world attend colleges and universities in record numbers. However, many in academia claim to have noticed a real shift in the atmosphere and nature of such institutions. Many students are shirking their studies in favor of leisure activities. Faculty requirements are diminishing, and grade inflation is rampant.

Are such casual observations indicative of actual trends? In their 2008 paper entitled "Leisure College, USA," Philip Babcock and Mindy Marks report that the average studying time for students in the US fell by 50% from 1961 to 2003, and that time spent studying fell regardless of institution, course load, subject of study, or employment status. Their quantitative analysis, drawn from three different data sets, is hard to refute.

There are three potential explanations for such a phenomenon. The first is demographic: with a rise in the number of students in college, quality has sunk, and a lower work-ethic mentality has become the norm. The second explanation has its foundation in economics: we should look at universities and their faculty as firms, with students as consumers in the market for degrees. In such a model, firms compete not only in price but in quality of service, with implications including work-load and leisure time. Some argue that students and professors have entered into a sort of "non-aggression pact," where students pay for faculty to do their research, while faculty reciprocate with grade inflation and fewer demands of students. While both explanations may well be valid, in the interests of a complete analysis a third possibility must be entertained. Namely, a purely economic model.

> "Students increasingly lack the proper incentives to study."

If we believe that individuals are rational and constantly optimizing their behavior to maximize their utility, then there must be a way to quantitatively show that students increasingly lack the proper incentives to study. The primary purpose of this article is to explore and model the economic reasons a student chooses to work hard or not.

The first question that we must address is whether or not doing well in college really matters. While good performance is critical for admission to law, business, medical, and graduate programs, its impact on entry level positions in the job market is much less apparent. Companies tend to look for sociability, networking, and leadership qualities, and seem to care less what grade you got in a molecular biology course. This approach seems especially rational in light of the fact that many people major in fields that end up having little to do with their career path (think of Carly Fiorina, CEO of Hewlet-Packard, who did her undergraduate work in Medieval History and Philosophy).

Even if courses are relevant to a particular field, variation in grading standards across institutions and among professors makes analyzing a transcript exceedingly difficult, particularly in the corporate world, which is quite distinct from academia. Work that earns an A at one university might only garner a B at another. It is neither practical nor profitable for companies to research what each grade in each course means for every candidate. Instead what they do look for are clearly visible – and relevant– qualities, such as attitude, work experience, and conversational ability. Although having a college education is a proven tool to unlock higher earning potential, is not clear that studying a particular subject or doing well overall conveys any tangible benefits for the corporate world. Even if such benefits were indeed rewarded, it is far from obvious that such incentives are apparent to individual students that are deciding how hard to study.

We shall now construct a basic economic model to see how working hard in school might have an impact on future income. Our analysis has two critical components. The first is that working hard in school will only have a probability of impacting future earnings, as has been already argued to be true for the majority of college graduates. The second component is that future earnings will be discounted in terms of present value.

What is discounting? The concept of discounting is well-illustrated by the old saying "a bird in the hand is worth two in the bush," namely that today's income, and thus consumption, is more valuable than the same amount in the future. Another way of looking at discounting is considering the present value of money in the future. Say I offered the choice between £100 in one year or £75 today. Which would you choose? Your answer illustrates your rate of discount: if you were indifferent between the two amounts you would have a discount rate of no less than 33% per year.

Perhaps the most common way the discount rate is presented is as "the opportunity cost of money," namely considering the foregone income that investing that money today would bring. It is for this reason that the standard presentation of discounting uses the interest rate as the discount rate.

$$Present\ Value = \frac{Payout\ in\ time\ t}{(1+r)^t}$$

If we were dealing with a stream of future payments, we would simply sum over time, yielding what is called Net Present Value.

$$NPV = \sum_{t=0}^{t=n} \frac{Payout\ in\ time\ t}{(1+r)^t}$$

However, our illustrative example shows that it is quite reasonable to have a discount rate far greater than that of the official, risk free interest rate. What discount rate should we use then? There is a great deal of literature on the subject, expressing a variety of opinions. I shall thus offer three different rates for purpose of comparison: 7%, calculated from average return on before-tax investment and real estate, 10%, a midpoint of sorts, and 15%, often used by followers of Warren Buffet for investment purposes. It is quite possible that individuals, in particular supposedly "near-sighted" college students, may have even higher discount rates due to a stronger preference for immediate consumption. In that case our conclusions, based upon underestimated rates, would be even more compelling.

Let us now formally construct three potential income growth patterns, factoring in the probability that hard work in college is recognized by employers.

Salary model 1: This model entertains the possibility that, due to your hard work, you are rewarded with a higher starting salary. A real-life example would be starting out in a more senior position than those who did not study hard in college. Your expected starting wage W_0 would thus be:

$$W_0 = p \cdot W_{high} + (1-p) \cdot W_{low}$$

In other words, there is a p probability that you are rewarded with a higher salary W_{high}, and thus a 1-p probability that your hard work had no impact on your starting salary W_{low}.

Salary model 2: Having a higher starting salary, however, is not the only possible benefit that being recognized for hard work might entail. Perhaps you are able to negotiate a higher rate of salary growth, in the form of promotions, bonuses, and the like. In this case there would be a probability p that your salary would grow at a faster rate g_{high} than it otherwise would grow at (the lower rate of g_{low}). Thus your expected salary in period t+1 would be:

$$W_{t+1} = p \cdot W_t(1+g_{high})$$
$$+ (1-p) \cdot W_t(1+g_{low})$$

Salary model 3: For the sake of argument, let us construct a third, best-case-scenario. This model is a combination of the first two, and will reward diligent students both a higher starting salary and with a higher rate of salary growth. For simplicity we will assume that the probability of being recognized with both a higher salary and higher rate of salary increase is the very same p.

Thus

$$W_0 = p \cdot W_{high} + (1-p) \cdot W_{low}$$

and

$$W_{t+1} = p \cdot W_t(1+g_{high})$$
$$+ (1-p) \cdot W_t(1+g_{low})$$

What would be a reasonable value for p, the probability that your hard work is recognized by your employer and you are rewarded? For the purpose of this exercise, I chose probabilities of 5%, 10%, and 20%. Since it is nearly impossible to quantify "hard work," this probability may seem rather artificial. What is important, however, is that there is an uncertain payoff. Whatever the actual probability may be is irrelevant; the only thing that matters is what students perceive the probability to be, for which a value of below 20% seems reasonable.

Now that we have the framework for our model, we shall input some values for our variables and see what conclusions we can draw. Needless to say, such values are arbitrary. Their exact value is irrelevant to the purpose of this exercise; we only want them to be reasonable enough to garner a basic understanding of what sort of cost-benefit analysis students might be facing.

For the sake of simplicity let's say that an average individual who does not work hard in college earns a starting annual salary of $W_{low} = \$30{,}000$. Adjusted for inflation, let's suppose that his or her salary grows at a constant rate of $g_{low} = 2\%$ per year, a commonly cited rate.

Now, let's introduce the reward for working hard in college: a higher starting salary of $W_{high} = \$40{,}000$, a full 33% higher. However, recall that attaining this higher salary is not a given, but rather has a probability p. Our first and third models thus have:

$$W_0 = p \cdot 40{,}000 + (1-p) \cdot 30{,}000$$

Let us also set the higher rate of salary growth $g_{high} = 4\%$ per year, double that of the lower rate. (If anything, such a value may be too high.) Finally let us assume that the individual works for 45 years, at which point he or she retires.

Thus our three models are as follows:

Model 1:

$$W_0 = p \cdot 40{,}000 + (1-p) \cdot 30{,}000$$

Model 2:

$$W_{t+1} = p \cdot W_t(1.04) + (1-p) \cdot W_t(1.02)$$

Model 3: Both equations from 1 and 2

We then calculate the Net Present Value of each model with all three discount rates and probability values, and take the difference from our base case of $30,000 growing at a rate of 2% per year. See figure 1.

We can quickly see that the total difference in lifetime earnings can grow quite rapidly as p increases. Even the $37,000 difference with a p=5% in model 1 is no small amount. The differences are even greater in models 2 and 3. However, we quickly see the massive impact that applying a discount rate has on our results. The large difference of $406,258 with a p=20% in model 3 (the best possible return for working hard) shrinks to a relatively small $26,340 with the perfectly reasonable 15% discount rate. The effect is even more pronounced in model 2, where $241,497 shrinks to $8,174 where p=20% also at a 15% discount rate.

We may conclude from these data that two factors decrease the return to studing hard:

- Lower perceived probability that studying hard will translate into real financial rewards in the workplace
- Higher value placed on leisure (relaxing, spending time with friends, etc.)

With p=5% in model 2 with a 15% discount rate (a reasonable scenario, in bold), the discounted return to working hard in col-

	Model 1			Model 2			Model 3		
	p=5%	P=10%	P=20%	p=5%	p=10%	P=20%	p=5%	p=10%	P=20%
Total Difference	$37,165.28	$74,330.56	$148,661.13	$57,600.55	$117,009.45	$241,497.33	$95,725.84	$195,240.33	$406,258.29
With 7% Discounting	$9,516.04	$19,032.08	$38,064.15	$8,310.09	$16,812.69	$34,417.13	$17,964.23	$36,405.19	$74,775.75
With 10% Discounting	$6,661.79	$13,323.57	$26,647.14	$4,462.27	$9,011.70	$18,380.82	$11,198.43	$22,635.66	$46,253.34
With 15% Discounting	**$4,405.33**	$8,810.65	$17,621.30	**$1,999.50**	$4,027.99	$8,174.32	$6,438.15	$12,972.91	$26,340.58

Figure 1

lege is a measly $1,999. With the same values of p and the discount rate in model 1, the difference in net present value is only $4,405 (also bolded), a surprisingly low figure. It is not hard to imagine that the majority of college students would be willing to "buy" the ability to slack off in college for some of these estimated "prices." This is especially true if they believed that p was lower than 5% or their discount rate higher than 15%, as is doubtless the case for many students.

In conclusion, it seems that a classical economic interpretation supports the observation that the majority of college students lack the proper financial incentives to work hard in school. The inherent uncertainty that their work will truly "pay off," combined with the powerful effects of present value discounting, result in the fact that in all three models, working hard in school leads to shockingly little benefit. Especially under models 1 and 2, with p under 10% and a discount rate of 15%, the total benefit of four years of sweat and toil results in a lifetime benefit valued at less than some spend on a single consumer purchase or vacation. While I have not attempted to calculate the "cost" of working hard in school, it is clear from the disutility so many exhibit and the utility from leisure one observes that the opportunity cost of working hard must be exceedingly high. I know exactly where to find our generation of college students on a Friday night, and it isn't going to be at the library.

The Traveller's Dilemma

A Logical Paradox of Rationality

By Ceren Baseren

What makes game theory so interesting is its dilemmas. Game theory focuses on the behaviour of rational agents in a strategic situation, and while doing so, it may predict outcomes that are not preferred by any of the players. Many branches of social sciences makes use of game theory. Actually you never know when you'll encounter it.

In a Goldman Sachs interview, I was asked to solve the following:

Lucy and Pete, returning from a remote Pacific island, find that the airline has damaged the identical antiques that each purchased. The airline manager is willing to compensate them, however, is clueless about the value of the antiques. He cannot simply ask the travellers for the price, because they will inflate it, so he comes up with a scheme. He asks each of them to write down the price of the antique as any dollar integer between $2 and $100 without conferring together.

• If both write the same price, the manager will take that to be the true price and compensate them.

• If they write different numbers, the manager will assume that the lower is the actual price and the person with the higher price is inflating it. The manager will pay both the lower price together with a bonus and a penalty. The person who wrote the lower number will receive an additional $2 for honesty, and the person who wrote the higher number will get $2 less as punishment. For example, if Lucy writes $60 and Pete writes $100, Lucy will get $62 and Pete will get $58.

What number would you write?

The above 'brain teaser' – as the other interviewees called it- is the notable 'Traveller's Dilemma' (TD) crafted in 1994 by Kaushik Basu, Professor of Economics at Cornell. Fast-forwarding to the answer; the obvious choice seems to be to write down 100, however, game theoretically, a rational person would choose $2. Let's consider the following line of thought to see why $2 is a logical choice: Pete first thinks of writing down the maximum possible compensation, 100, which will earn him $100 if Lucy was to be as greedy. Soon, however, it strikes him that if he were to write 99 and Lucy wrote 100, Pete would receive a reward of $2, totalling to $101. There is an incentive to write an incrementally lower number to receive the reward. But of course, Lucy must be aware of this too; she could write 99 as well. In that case, Pete thinks of writing 98, in order to receive $100. And so, this method (backwards induction) converges the answer to the lowest possible number, 2. When both players follow the same logic, they receive $2 each. The game has a Nash equilibrium at (2,2).

The trouble in TD lies in its prediction, (2,2). Most of us feel that we would play a larger number than 2 and on average make more than $2! Over the past decade, there have been several experiments, both real and laboratory, where economists were asked to play TD. In one of the experiments (Becker, Carter, Naeve 2002), 51 members of the Game Theory Society, virtually all of whom are professional game theorists, played TD against each of their 50 opponents with a real-money reward system. Here are the results: 45/51 chose to use a single number to use in every game (the other six selected more than one number). Among those 45, only three chose the Nash equilibrium (2), ten chose (100) and twenty-three players chose numbers ranging from 95 to 99. That means approximately 75% of the players chose a number above 95. Basu underlines that if people - especially those whom are considered to be rational players, aware of the rationality of the other players (i.e. Common Knowledge of Rationality – CKR) - choose not to play the Nash Equilibrium strategy, economists' assumptions of rational behaviour should be revised.

Is it the burden of CKR that chains us to the prediction of (2,2)? There seems to be rationality in choosing not to play the Nash Equilibrium. In other words, the rational choice is not to be rational. It is hard to formalize an argument based on the rejection of rationality. Are we to free ourselves from CKR (epistemic independence) and not impose this strict rule of rationality? Basu proposes that if he were to play the game, he would say to himself 'forget the game-theoretical logic. I will play a large number (perhaps 95), and I know my opponent will play something similar and both us will ignore the rational argument that the next smaller number would be better than whatever we choose.' The interesting part, according to Kasu, is this rejection of formal rationality, and, logic has a kind of meta-rationality attached to it. So, the suggestion is not epistemic independence. We do actually use CKR (the knowledge of every player being rational) to reject the rational choice (2), in order to reach a more socially-efficient outcome (i.e. a large number such as 95).

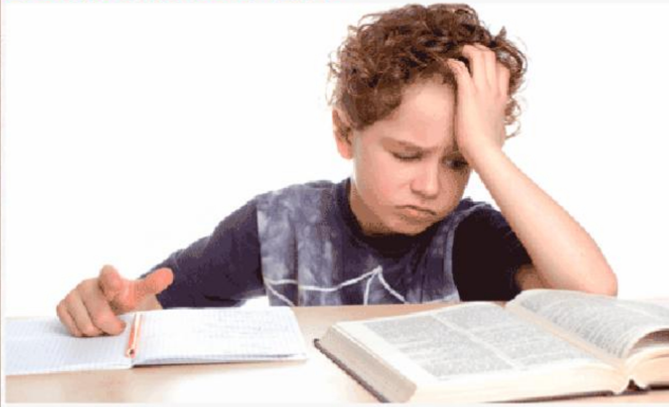
The logic that Basu himself proposes to take, is similar to the logic of backwards induction,the formal game-theoretical solution method. Only, his solution of this meta-rationality is one of altruism (just like the choice of the majority of the game-theorists in the experiment): Knowing that everyone knows that we can gain a greater amount by selecting a large number. Even if the numbers are not an exact match and one of us is punished (by losing $2), since we would have both chosen a similar large number, this punishment increment is negligible. A socially-optimum, pareto-superior outcome can be reached with strategies of either 100 or high 90s. Dilemmas like the TD always pose questions with their predictions of a socially-inferior outcome. Considering the results of experiments, it seems likely that humans are driven by altruism and socialization in their decisions. If these strategies are based on an evaluation of altruism, then maybe this intrinsic human trait should also be considered in the solution method. As TD is a relatively new game, literature on the suggested 'meta-rationality' is to be developed.

"Dilemmas like the TD always pose questions with their predictions of a socially-inferior outcome."

The argument is that the results of Traveller's Dilemma not only contradict economists' assumption that game theory can predict how supposedly selfish rational people will behave, but also show how selfishness is not always good economics. We are left to find a new kind of reasoning (meta-rationality) to gain a rigorous understanding of this rational choice not to be rational.

	Pete's Choice ($)					
Lucy's Choice ($)		**2**	**3**	...	**99**	**100**
	2	2 2	4 0	...	4 0	4 0
	3	0 4	3 3	...	5 1	5 1
	....	...	...	...	...	...
	99	0 4	1 5	...	99 99	101 97
	100	0 4	1 5	...	97 101	100 100

The Traveler's Dilemma: the blue outline restricts the game only to outcomes 2 and 3, which is equivalent to the Prisoner's Dilemma.



The Economics of Studying: Part II

The Incentives derived from the Level of Strictness of Marking

By Rifdi Rafiuddin

We have seen from the previous analysis in the General Theory of Studying and Examination Mark Determination that the mark that you achieve during an examination is directly proportional to the amount of knowledge that you attain while you are studying. However, before taking an examination, we also have to submit assignments or homework during the tutorials that we attend for the respective subject modules that we study. It is definitely familiar to every student how the mark that we attain from that particular piece of submitted assignment will either motivate us to study harder or demoralise us as we had initially set ourselves a certain mark that we hope to attain for that submitted assignment. Achieving a mark that surpasses our expectations might also result in complacency as it might reinforce a false belief that we in fact would not need to put in as much effort studying for the subject as we had previously planned to commit. In this issue of the Economics of Life series, we will explore how the level of strictness that a particular piece of submitted assignment is being marked will determine the motivation level of students to study harder for the subject module.

The first assumption that we will make is that the level of strictness of the marking of an assignment has to be based upon the amount of effort that we put in when we were completing that piece of work. Therefore, we will not take into consideration the mark that we achieve (whether we in fact do well or badly) in a piece of submitted assignment, however, we will take into consideration the expected mark that we had anticipated to attain from that submitted piece of assignment and compare the difference between the actual mark that was given and the expected mark. The difference between the actual mark and the expected mark will be collectively termed as the level of strictness of marking. The level of strictness of marking will be adopted in this model as the only factor that will influence the level of motivation for a student to devote a larger proportion of time in a day to studying.

> "The mark that we attain will either motivate us to study harder or demoralise us"

Level of Strictness of Marking = Expected Mark – Actual Mark

We therefore assume that for every piece of submitted assignment, the student will anticipate achieving an expected mark from it. The main factor that determines the expected mark that the student anticipates to attain is the amount of effort that the student takes in completing that particular submitted assignment. If the student puts in a lot of effort to complete the piece of submitted assignment and expects to score well for it, the expected mark that the student will anticipate to attain will be higher. Conversely, if the student did not put in a lot of effort to complete the piece of submitted assignment and thus does not expect to score well for it, the expected mark that the student will anticipate to attain will be lower.

We must also take note that the expected mark that the student anticipates to attain is also dependent on the difficulty of that particular piece of assignment. Therefore, in addition to the amount of effort that the student took in completing the particular submitted assignment, if the submitted assignment was perceived by the student to be difficult, this will result in the expected mark that the student anticipates to attain to be lower. Conversely, if the submitted assignment was perceived by the student to be easy, this will result in the expected mark that the student anticipates achieving to be higher. Nevertheless, we have to understand that the expected mark that a student is expected to attain is particularly difficult to quantify as the amount of effort put in by the student is very much dependent on how the student perceives to have done in that particular submitted assignment.

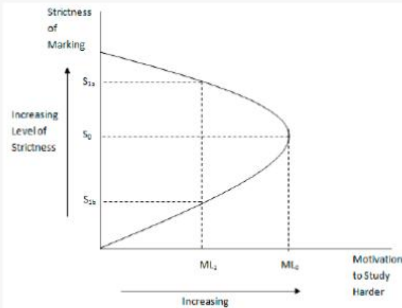


Diagram 1a: Backward Sloping Level of Strictness-Motivation

Another assumption that we will be making is that as you become increasingly motivated to study harder, the average number of hours that you study in a day increases. The average number of hours that we study in a day is directly proportional to the level of motivation for you to study harder. Therefore, as you become increasingly motivated to study harder, you will devote a larger proportion of your time in a day to studying.

As we can see from Diagram 1a, if the marker were to mark a certain piece of submitted assignment at the level of strictness S0, the motivation level of the student to study harder will be at the level ML0. At this particular motivation level ML0, the corresponding average number of hours spent studying will be X0 hours of studying as shown in Diagram 1b. Similarly, if the marker were to mark a certain piece of submitted assignment at either the level of strictness S1a or S1b, the motivation level of the student to study harder will be at the level ML1. At this particular motivation level ML1, the corresponding average number of hours spent studying will be X1 hours of studying as shown in Diagram 1b.

Notice that at the level of motivation ML1, the level of motivation for a student to study harder can be derived from Diagram 1a. As can be seen from Diagram 1a, the level of motivation for the student to study harder is the same at both the levels of strictness of marking that is stricter, which is shown as the level of strictness S1a in Diagram 1a, or more lenient, which is shown as the level of strictness S1b in Diagram 1a, because as the marker becomes increasingly stricter or more lenient, the level of motivation to study harder that is faced by the student will continue to decrease at an increasing rate. The reason behind this is that when a student receives an actual mark from that particular piece of submitted assignment that is different from the expected mark that the student had anticipated to have attained that corresponds to the amount of effort that had been taken, the student will be increasingly less motivated to study harder. If the level of strictness of the marker increases beyond the optimum level of strictness of S0, the motivation level of the student to study harder will decrease at an increasing rate as the student becomes increasingly more demoralised when receiving an actual mark from the submitted assignment that is much lower than the expected mark. Similarly, if the level of strictness of the marker decreases below the optimum level of strictness S0, the motivation level of the student will also decrease at an increasing rate as the student becomes increasingly more complacent when receiving an actual mark from the submitted assignment that is much higher than the

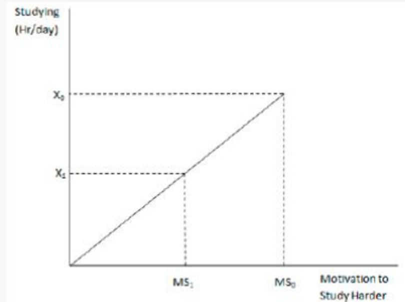


Diagram 1b: Relationship between the increase in the Level of Motivation to Study and Hours Spent Studying

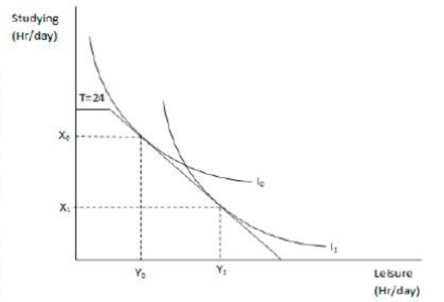


Diagram 2: Relationship between Hours Spent Studying and Leisure

expected mark. This will therefore lead to a backward sloping level of strictness-motivation curve as shown in Diagram 1a.

In conclusion, when the level of strictness of marking is at level S0, we will in turn devote an average of X0 hours to studying. At this level, we will be able to achieve the highest level of motivation to study harder from the level of strictness. This in turn will reflect a mark of M0% of the marks that can be achieved from the examination as shown in Diagram 3 and this corresponds to an average of X0 hours of studying in a day as shown in Diagram 2. Similarly, when the level of strictness of marking is either at level S1a or S1b, this would result in an average of X1 hours that will be spent studying. As shown in Diagram 2, X1 hours spent studying will result in a M1% of the marks that can be achieved during the examination as shown in Diagram 3. Therefore, this shows that in order to attain the highest mark during the examination, the student will have to be at the highest level of motivation to study harder in order to be willing to devote a larger proportion of time to studying rather than leisure. As shown in Diagram 1a, to attain the highest possible level of motivation to study harder, the strictness of marking will have to be optimally at level S0 as shown in Diagram 1a.

However, akin to every idealized model, this model is not able to take into account some factors that affect the level of motivation of students to study harder. As the level of motivation of students to study harder is closely related to psychology and behaviour, we must take into consideration that different students have different personalities and react differently to receiving an actual mark that is higher or lower than the expected mark that the student had anticipated. Receiving a mark that is lower than the expected mark the student anticipates to attain might very well encourage the student to study harder and this will increase the level of motivation of the student. Nevertheless, we must also consider the level of determination of the student. Consistently receiving a lower mark from subsequent submitted assignments will eventually affect the student negatively and thus will reduce the level of motivation of the student in the end. This will in turn reduce the average number of hours that a student might spend on studying. Thus, in the long run, this model will still be applicable. The factor which determines when this point will occur is the level of perseverance that the student possesses. If the student is very determined to study harder to improve the mark that is eventually attained during the examination, the student will be able to sustain having a higher average number of hours spent on studying till the point where the student will not be encouraged enough to spend a particular amount of time on studying. When this point is reached, the student will have a level of motivation to study harder that is proportional to the strictness of marking (expected mark – actual mark) as shown in Diagram 1a.

We must also understand that the level of motivation to study harder is not only affected by the level of strictness but there are other factors as well that influence the level of motivation to study harder. We will explore about more of these factors in the future issues. In the meantime, in order to attain a particular mark as shown in the total knowledge curve, one of the best behavioural methods that we can adopt is to be motivated to study harder in order to increase the average proportion of time that we devote to studying in a day.

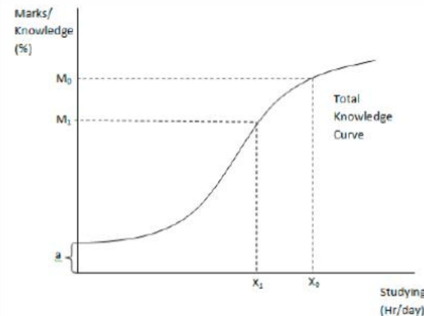


Diagram 3: Total Knowledge Curve

The Donations Dilemma

Are we truly helping the poor and homeless?

By Rifdi Rafiuddin

As you walk along the streets of London, you will ineluctably see homeless people sleeping along the streets on the cold hard ground with nothing more than a few layers of clothes to keep them warm at night as the unforgiving blistering wind howls. Watching them sleep in the open, vulnerable to the elements, a sense of charity usually overwhelms a person as feelings of empathy prevail over the less fortunate. But are we truly helping them whenever we extend our hand of generosity? Are we doing more harm than good? The Vagrancy Act 1824 in the United Kingdom states that it is illegal for people to sleep on the streets or beg for money in order to curb the influx of homeless people. The social and economic consequences of unemployment and homelessness are apparent; we simply need to look around us to see the disparaging effects it causes the society and the individual. However, let us examine whether providing them with donations as an act of charity would have long-term positive or negative consequences as opposed to the obvious short-term purpose that donations were meant to fulfil. Moral consciousness and our civic sense of duty to humanity will definitely lead us to agree that donations to the homeless or beggars in general, are something that is considered desirable. The aim of this article is not to question about the benefits of the act of giving as a form of charity, but ethical and moral reasoning put aside, let us analyse the donations dilemma from an economist's point of view.

The issue of incentives is an important factor that determines whether it is economically desirable to give donations to beggars. Would the donations that beggars receive form a disincentive for them to find employment? Is it a barrier that hinders them from escaping the cycle of poverty? Although donations are meant to help sustain the less well off in society for a period of time when they are not able to find other sources of income, this act of kindness can also be abused. As the amount of donations that beggars receive increase, they will begin to become increasingly more satisfied with their current state and thus realise that they don't really need to find employment to sustain them. We will not specify an absolute amount of donations that will result in this level of satisfaction to be attained as such an amount will differ from person to person depending on their varying circumstances.

In Diagram 1a, we can see that the amount of donations that will still induce an incentive for the beggar to find employment is any amount between D0 and D1. We will assume that this model applies to beggars who are unemployed but intend to find employment; therefore, the graph begins on the positive axis with the

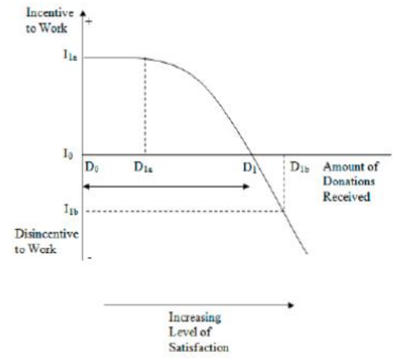


Diagram 1a: Relationship between Amount of Donations Received and Incentive to Work

level of incentive to work I1a. Initially, donations received by the beggar up till the amount D1a will not provide any disincentive for the beggar to find employment because the beggar has not reached any level of satisfaction to feel comfortable enough at that particular state. Therefore, the beggar will continually seek employment at that level with the same fervour in order to solve their predicament and improve their situation. However, when the amount of donations received exceeds the amount D1a, we can see that the level of incentive to find employment decreases as the beggar is able to lead a more comfortable lifestyle. From this stage onwards, any further increase in donations will continue to decrease any incentive for the beggar to find any employment till the beggar becomes too comfortable with the state of being derelict that there will come a point, shown as the amount D1, where any further increase in the amount of donations received will result in a disincentive to work. Therefore, if the beggar was to receive donations beyond the level D1, there is an added disincentive for them to remain in their current state of being, which might pose to be an undesirable consequence for the rest of society.

Donations can be considered a source of income, however uncertain and unpredictable the amount may be. At times, the money received from begging is sufficient to provide their meals for the entire week, at other times it is not even enough for them to buy a morsel of food. Therefore, we have to take into account the uncertainty of donations as a factor that will determine whether it will cause an incentive or disincentive for people to find work.

Although, we cannot determine the absolute level of donations that any beggar has to receive in order for them to be indifferent between finding employment or to remain unemployed, we are able to define this level as the point at which they become satisfied with their current state. This will depend on the state of mind of the beggar, and depending on what is the average amount of donations received in a day, there is a possibility that the beggar might "accept" or even be contented with their state of poverty that they do not attempt to solve their plight. As this level differs from individual to individual, it is difficult to determine whether a person has reached the point in which any additional amount of donation received will lead to a disincentive to find employment. For example, we can see how Christopher Gardner as portrayed by Will Smith in the 2006 movie titled "The Pursuit of Happyness", became a homeless person and yet despite his miserable state, is extremely motivated to be a stockbroker despite the odds. Therefore, for a person like Christopher Gardner, the amount of donations that he will have to receive before the incentive to work decreases, as shown as the amount D1a in Diagram 1a, is very high. Nevertheless, this might not necessarily be the case for everybody.

Another important factor that determines whether donations will encourage beggars to find an avenue out of their predicament is the reason which landed them into their situation. Studies indicate that some of the reasons that cause homelessness include substance abuse, mental illness, the unavailability of employment opportunities and poverty resulting from unemployment. Then there is the question of beggars who simply do not want to find employment but are contented with the state in which they live in. If the person is not in their current state out of choice, they will attempt to escape from poverty and improve their current situation. However, there are some beggars who, either because of psychological or mental conditions refuses to find work. As seen in Diagram 1b, we can see that these people have already decided to remain unemployed and survive through the donations they receive. They begin at the level I1a, which is at the negative axis, thus they already refuse to find work from the beginning and any additional amount of donations that they receive will simply further result in them refusing to find employment.

We cannot deny the obvious benefits of providing beggars with donations in the short-term. Assuming that the person we are helping are indeed people trapped in the vicious cycle of poverty and not simply a person that has the means to survive but resorts to begging because they are disinclined to work, donations may be the only source of income that they have to survive. We must also not ignore the fact that some people are in their state of plight due to unfortunate circumstances and genuine hardship such as disabilities and domestic problems, which prevent them from being able to provide for themselves or improve their situation. Therefore, as long as they do not abuse and take for granted the charity of others, these people should be deserving of our pity. Nevertheless, we should always remember that as human beings, care and concern should be virtues to endeavour for.

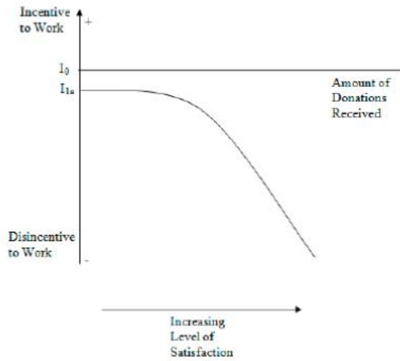


Diagram 1b: Scenario when Any Amount of Donations Received will lead to a Disincentive to Find Employment

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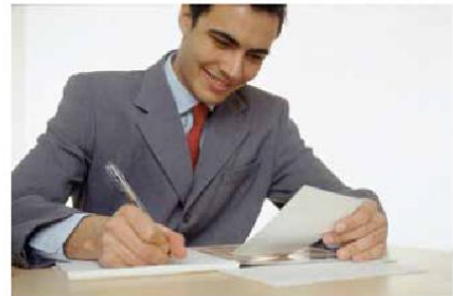
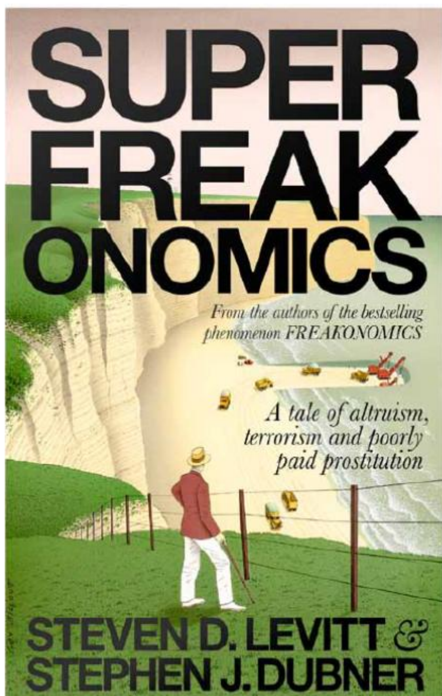


Superfreakonomics

By Steven D. Levitt and
Stephen J. Dubner
Allen Lane £20

Review by Aiasha Khalid



Self proclaimed "rogue economist" and all round good guy, Stephen Levitt and his über-eager sidekick Stephen Dubner continue where they left off four years back, only this time the economics is (supposedly) bigger, better and "super-freaky". True as ever to their ethos, "people respond to incentives", after selling 4 million copies of their first book, they are well and truly back with more of the same – and the funny thing is, it works.

Freakonomics grabbed the dim flame of pop-economics and haphazardly ran with it into the imponderables of everyday life, making social scientists of us all; not always for the greater good. Superfreakonomics once again applies Levitt's time-honoured system of analysing data on hugely varied subjects in an effort to find ever more surprising, sensationalist and tenuous correlations.

Superfreakonomics passionately provokes us to understand the world as it is really is, to become detached, listen to the data, in order to change it. Levitt and Dubner claim they are scrutinizing homo-economicus human behaviour to find answers to contentious questions from an objective academic viewpoint; but when these questions are as serious as climate change, this is difficult to pull off in a few pages. Often, the 'empirical' research backing their analysis is inspired by amusing profiles, such as that of Allie, a high end prostitute. Let's face it –who doesn't like a good story; however, these champions of 'data' lose their credibility by diluting the facts with stories laden with surprises and twists.

Indeed, Levitt and Dubner admit early on that their findings on any of the subjects they glance upon "may not be entirely useful or conclusive" or that we won't find any content to argue with. They then proceed to meander through the provocative economics of prostitution, the banking habits of terrorists, the frequent lack of inefficacy of chemotherapy (doctors only incentives to prescribe it are personal profit and desire to avoid bearing bad news) and the surprising defects of altruism (such as in the market for kidney donations) to the highly criticised chapter on climate change.

Sitting in on a discussion held by Nathan Myhrvold and the Intellectual Ventures company, which admittedly works outside of the climate change establishment, the authors report back on the company's climate change views and proposed global warming solutions involving geoengineering, the deliberate modification of the environment in order to prevent climate change. The most controversial of these solutions involves installing "a giant garden hose to the sky", to send a controlled injection of sulphur dioxide into the stratosphere. The plugging of this "brilliant" idea takes place under the pretence of a discussion of externalities – drawing criticism from Paul Krugman, who wrote "that the first five pages, by themselves, are enough to discredit the whole thing."

Superfreakonomics falls short of representing microeconomics as it is known to students and academics. It instead uses economics for provocation, taking the dismal science and flinging it in the other direction for better or worse. Essentially, this is textbook economics merged with comic book economics – thought provoking and good for a laugh. If applying supply and demand to the market prices of services offered by prostitutes on Chicago's south side gets you going, then the whole book will be a laugh a minute. On the other hand if you are looking for ground-breaking research from a brilliant economic mind, as Levitt's many accolades suggest, you might be disappointed.

It is without doubt entertaining and extremely amicable in its approach to the reader, but cover to cover, it doesn't quite convince the non-expert reader that economists have the ability to solve all the world's problems when armed only with accurate data. It cannot be denied that *Superfreakonomics* builds on the global "economics for entertainment" craze, but this book ain't super freaky, more just obtuse.

How Markets Fail: The Logic of Economic Calamities

By John Cassidy
Allen Lane £25

Review by Simon Black

Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist." This famous Keynesian quip best summarises John Cassidy's new critique of the credit crisis and the ideology that underpinned it, entitled, *How Markets Fail: The Logic of Economic Calamities*.

Cassidy, a Yorkshireman now writing for the high-brow New Yorker magazine, has written about such things before. His previous book, Dot.Con, was a hugely entertaining account of the excesses that led up to the dotcom burst of the late 1990s. However, where the dotcom bubble had self-interested and greedy tricksters as the prime suspects in a case of whodunit, Cassidy avoids character attacks in his latest opus. The guilty parties in this case are "neither sociopaths nor idiots nor felons," but individuals infatuated general equilibrium theory; what he calls 'Utopian economics'.

The bulk of the book is a systematic attack on such blind faith in markets. It begins with a decent history of economic thought, eliciting the major characters who contributed to the discipline's development towards parsimony: Smith, Hayek, Walras, Solow, Pareto, and Arrow. Following this, counterfactual arguments,most taken from economics, are discussed. Such reductive models are shown to exclude more than they convey: the market for lemons, the prisoner's dilemma, externalities, herding. Markets cannot always be relied upon to create mutually beneficial outcomes: monopoly power, strategic interactions, hidden information, speculative bubbles, bounded cognition, uncertainty, and trend-following are all discussed. In light of this, the majority of economists moved away from general equilibrium theorising, to game theory and "reality-based economics" (which Cassidy somewhat oddly equates with behavioural economics). While the majority of the economics profession moved on, he argues, the popular and political face of the discipline, in the form of Milton Friedman, remained firmly wedded to its reductive precepts.

The final third of the book takes this cue and shows how "Utopian economics" was at the heart of the credit crunch. Charles Kindleburger's five-stage evolution of a bubble is used to describe the process, from displacement to boom, euphoria to peak, and finally bust. Here Cassidy speaks with an air of righteous indignation. And so he should – he was among the lonely camp of those warning of bubbles, long after the "illusion of predictability" had become firmly engrained. But in the context of the hot early noughties, he might as well have been wearing a sandwich board and yelling at traffic.

Suspects are summarily lined up, from capitalist to policy-maker. For capitalists, the problems of herding seem ever-present. But their problem is that they were being individually rational and collectively irrational. As Chuck Prince, chief executive of Citigroup, noted in 2007, "When the music stops... things will get complicated. But as long as the music is playing, you've got to get up and dance. We're still dancing." Two years later, his company's balance sheet in tatters, he was out of a job. For policy-makers, the problem lies more in the infatuation with parsimony, the love of Greenspan and Bernanke for mathematical elegance. Through professing intellectual autonomy, Cassidy argues, they became slaves to some defunct economist.

There is a lot of truth in these 350-odd pages. However, with equally devastating critiques emanating from stalwarts such as Joseph Stiglitz and George Soros, the arguments will appear either preaching-to-the-choir pleasing for those so inclined, or stale to the more iconoclastic of limits-of-markets initiates. For this reason, anyone who has read Soros or Stiglitz won't get much use out of the book, except perhaps with the addition of the recent financial crisis as a case study to validate what they already held true. In addition, if you're anticipating a criticism of all that is capitalism, don't expect Cassidy to be joining you amidst a haze of tear gas and dreadlocks any time soon. This is neither the sober analysis of a university professor, nor the sombre critique of a hard-left anti-capitalist.

Nevertheless, if you're looking for a good narrative of the credit crisis explained through a strong critique of market fundamentalism, combined with a decent history of the discipline, the book comes highly recommended. It may seem obvious to some, but to others it is a well-written elaboration of the bubble-hushed criticisms that are now decidedly back in the mainstream.

Fool's Gold: How Unrestrained Greed Corrupted a Dream, Shattered Global Markets and Unleashed a Catastrophe

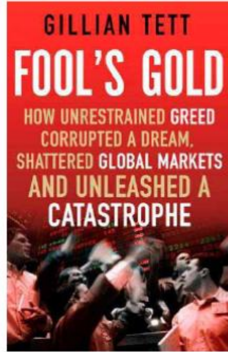
By Gillian Tett
Little, Brown £18.99

Review by Sneha Kotecha

I am sure I am not the only person who felt as if the credit crisis sprang out of nowhere, and then suddenly found myself hearing about CDOs, CDS, SIVs and every other acronym you can think of, without having any clue of their meanings. Being the kind of person who has to know the cause of things, I just simply wasn't convinced with the standard explanations of how subprime mortgages were defaulting, causing the value of securities tied to housing prices to plummet and thus making major financial institutions incur huge losses. I couldn't help but wonder why the subprime mortgages defaulting had such a monumental effect on the economy. What were the connections that linked all these areas of the financial world together to such a catastrophic end.

I tried looking for these answers by reading various articles on the internet, and yet I couldn't find anything which would satisfy my intellectual curiosity on the subject. But then I found Gillian Tett's Fool's Gold. When put like that, it almost seems melodramatic, but this book had a huge impact in terms of deepening my understanding of the world's worst financial crisis to date. Coming from an anthropological background, Tett captures the human element to the crisis. Her account is made all the more unique by the way she adds a real-world dimension to what otherwise seems like abstract concepts with very real effects to society.

Tett's tale is centred around a team of bankers at J.P.Morgan, unofficially known as the Morgan mafia, who are believed to be the creators of the credit derivatives world. In a gripping narrative, she goes on to explain how the J.P.Morgan team came up with idea to use derivatives to manage the risk attached to the loan book of banks with the intention of controlling risk, and how the rest of the financial world corrupted this "dream", amplifying this risk with disastrous consequences. The biggest irony of the whole story is that while other banks were busy bundling up mortgage loans to put into Bistro products, (the proprietary name for the idea of creating CDOs out of credit derivatives), J.P.Morgan limited its participation as they realised there wasn't enough data to show what would happen to these products if there was a downturn in the housing market. And in the end, this display of conservatism was vindicated.



I have hardly scratched the surface of this book, but all I can say is this- if you are looking for a holistic account of the credit crisis that provides an understandable insight into the murky world of complex finance and derivatives whilst simultaneously reading like a thriller, then Fool's Gold is it.

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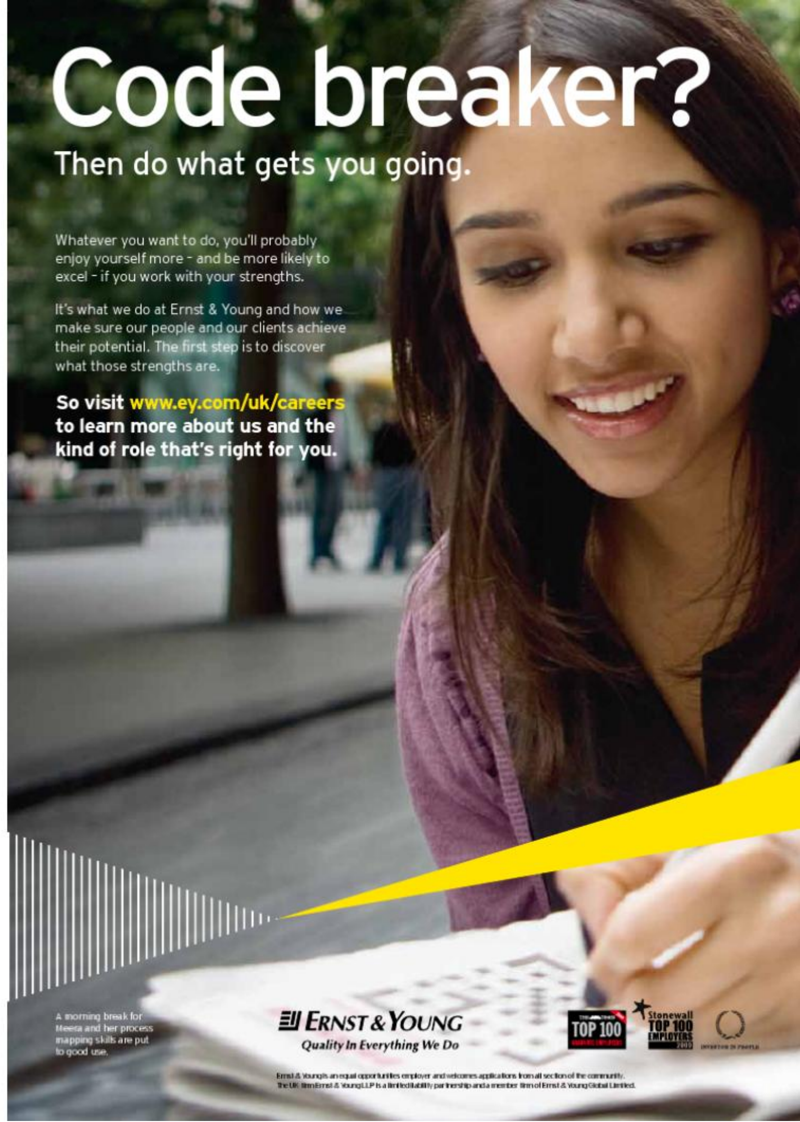

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